ECONOMIC COMMENTARY

# Alberta's Metal Manufacturing Industry Benefits from Oil and Gas Investment

August 28, 2013

**Highlights:**

The two fastest growing manufacturing sectors in Alberta during the past five years have been fabricated metals and machinery. Their strong expansion is the result of their links to the oil and gas sector, especially in Alberta but also in export markets.

Alberta Government

***Overview***

The metal manufacturing (MM) industry consists of the machinery, fabricated metals, and primary metals sectors. In Canada and abroad, metal manufacturing is strongly linked to the development of the oil and gas sector.

In Alberta, the MM industry's performance has been exceptional. Heavy capital investment spending in Alberta's energy sector has greatly benefited a number of manufacturing sectors, primarily those in the metal manufacturing industry. MM industry sectors have also been successful in penetrating foreign markets. As a result, metal manufacturing was Alberta's strongest growing industry between 2007 and 2012. The industry has weakened slightly in 2013, primarily as a result of a significant decline in international exports.

***The Industry***

This commentary will focus on the three sectors - machinery, fabricated metals, and primary metals - which together comprise the metal manufacturing industry[1].

The metal manufacturing industry includes 1,766 businesses, of which only 15% have more than 50 employees; 85% of MM businesses are categorized as small (less than 50 employees). The industry's workforce totaled 53,620 workers in 2012. Between 2007 and 2009, the number of jobs in the machinery and fabricated metals sectors fell by more than 10,000, with the largest losses registered in the architectural and structural metals, other general-purpose machinery (mainly pumps and compressors) and agricultural, construction and mining machinery (mainly oil and gas field machinery) sub-sectors. Employment in these two sectors has been on the rise since then, and by 2012 about one-half of the earlier losses were regained, with almost all of the employment gains occurring in the oil and gas field machinery sub-sector.

The entire MM industry had revenues of $16.7 billion in 2012. On a revenue basis the industry's largest sub-sectors are as follows:

| Sub-Sector | 2012 Revenues ($ Millions) | Growth 2007 – 2012 (%) |
|---|---|---|
| Oil and gas field machinery | 5,149 | 66 |
| Architectural and structural metals | 2,535 | 12 |
| Primary metals | 2,200 (estimate) | N/A |
| Pumps and compressors | 1,233 | 7 |
| Boilers, tanks and shipping containers | 1,103 | 18 |
| Machine shops | 1,072 | 29 |
| Coating, engraving and heat treating activities | 452 | 11 |
| Heating, ventilation, and air-conditioning | 402 | 56 |

[1] For some of the indicators, such as GDP and employment, insufficient data are available for the primary metals sector. In those instances, the discussion will focus on fabricated metals and machinery.

equipment (HVAC)

**Chart 1**
**Revenue Shares in 2012 for Major Sub-Sectors**

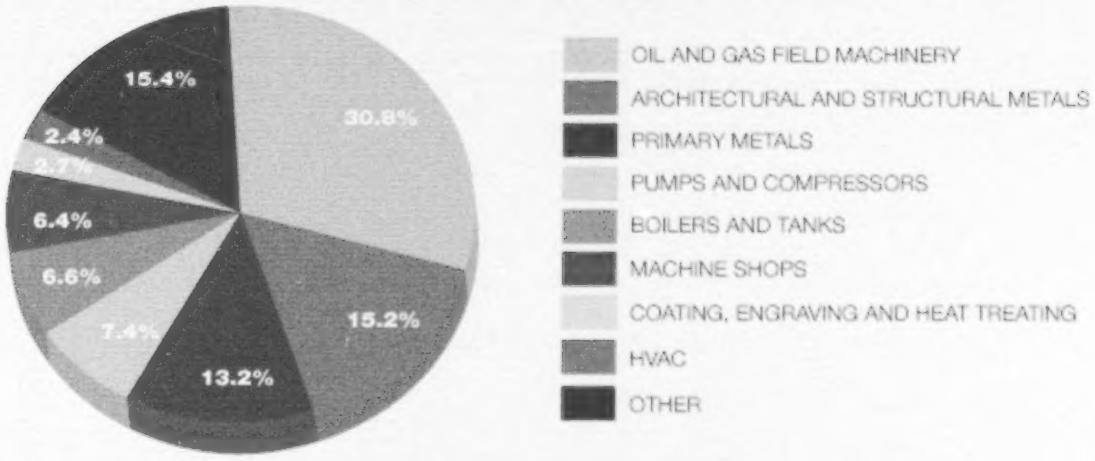
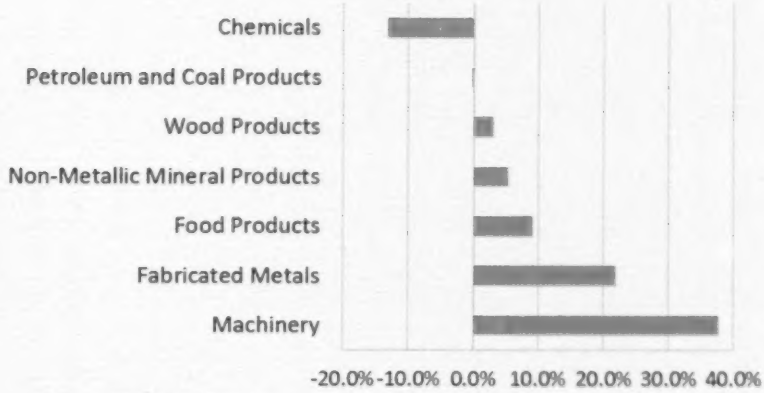



**Chart 2**
**GDP Growth for Alberta's largest Manufacturing Sectors 2007 to 2012**



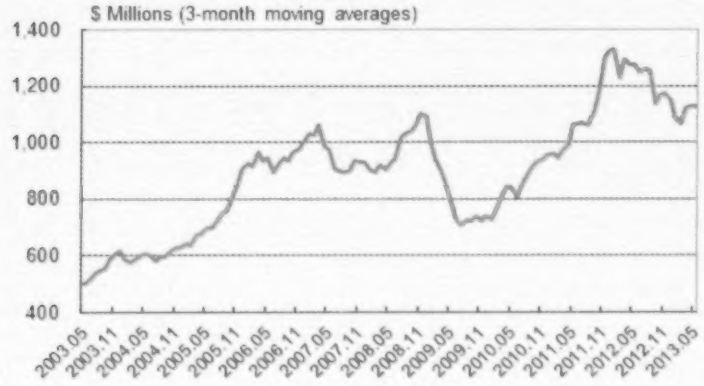

Source: Statistics Canada

Between 2007 and 2012, the fabricated metals and machinery sectors were the fastest growing manufacturing sectors in the province with output growth of 22% and 38% (Chart 2), respectively, compared with a 5% increase in Gross Domestic Product (GDP) for Alberta's total manufacturing sector.

The MM industry was not immune to the global economic crisis - due to weakness in the oil and gas sector, the industry's GDP declined sharply in 2009; fabricated metals output fell 19% and machinery output 25%. However, these two sectors have rebounded strongly since then as GDP for metal fabrication rose 42% between 2009 and 2012 and for machinery 81%.

The value of shipments (revenues) started declining in early 2012: between January 2012 and May 2013 shipments fell 15% (Chart 3).

**Chart 3**
**Value of Shipments in Machinery and Fabricated Metals Industry**




Source: Statistics Canada
Excludes Primary Metals

The machinery and fabricated metals sectors experienced strong productivity growth between 2007 and 2012. This is evidenced by a 27% in the value of shipments to $14.5 billion and a 30% increase in GDP, while trimming labour requirements by 10% to 50,390[2].

The industry is vital to and integrally connected with Alberta's energy sector. In 2009, Alberta's oil and gas sector purchased $4.9 billion in products from domestic and international companies in the MM industry: $2.5 billion in industrial machinery; $1.8 billion in primary metals; $634 million in fabricated metals.[3] Moreover, Alberta's engineering construction sector, which derives most of its revenues from oil and gas projects, purchased an additional $2.9 billion: $1.5 billion in fabricated metals; $1 billion in primary metals; $365 million in industrial machinery.

***Output and Exports***

Approximately 55% of the industry's output is shipped to customers within the province, mainly in the oil sands and conventional oil and gas and engineering construction sectors. A further 15% is shipped to customers in other provinces.

About one-third of this industry's production is exported internationally. International exports nearly tripled between 2002 and 2008 to $6.1 billion, mostly as a result of very strong growth in exports of oil and gas field machinery and of cobalt and nickel products. The industry's exports fell by 29% between 2008 and 2010 to $4.4 billion, as exports to the US, which accounts for at least one-half of Alberta's MM exports, fell by one-third, to Mexico by 75% and to Japan by one-half. International exports of oil and gas field machinery fell by more than one-third over that time period and of steel products, such as line pipe for oil and gas pipelines, by more than 60%.

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[2] All employment estimates are from Statistics Canada Table 383-0031 - Labour statistics consistent with the System of National Accounts (SNA), by province and territory, job category and North American Industry Classification System

[3] Source: Statistics Canada *Symmetric Input-Output Table for Alberta 2009*

The export decline was reversed in 2011 as exports increased by 24% compared to 2010. The value of exports declined slightly in 2012, as a sharp decline for primary metals (cobalt and nickel products) more than offset increases for machinery and fabricated metals. In 2012, the largest export gain was registered in the pumps and compressors sector (up 102%). The industry's largest export markets are the US, with a 56% export share in 2012, followed by the Netherlands (7% - mainly nickel products), Australia, South Korea, Russia and China.

In the first half of 2013, MM exports declined by about 14%, compared with the first half of 2012, as all three sub-sectors registered declines. Year-to-date machinery and primary metals exports fell 15% and fabricated metals exports declined by 10%. Most of the decline is concentrated in the US market with a decline of about 20% of MM imports from Alberta, and especially in the Texas and North Dakota markets which tumbled by about 30%.